Advanced Powertrain Research Facility

Downloadable Dynamometer Database (D[3])- Test Summary Sheet

2012 Nissan Leaf

Vehicle architecture	Battery Electric
Document date	10/15/2012
Revision Number	1
Notes:	

Vehicle Setup Information

Initial Vehicle Mileage	5750
Vehicle dynamometer Input	
Test weight [lb]	3746
Target A [lb]	41.06
Target B [lb/mph]	-0.3082
Target C [lb/mph^2]	0.02525
Test Fuel Information	
Fuel type	Electricity
Fuel density [g/ml]	-
Fuel Net HV [BTU/lbm]	-

Test ID [#]	Cycle	Cold start (CS)/ Hot start [HS]	Date	Test Cell Temp [F]	Test Cell RH [%]	Test Cell Baro [in/Hg]	Vehicle cooling fan speed: Speed Match [SM] or constant speed [CS]	Solar Lamps [W/m2]	Veicle Climate Control settings	Hood Position [Up] or [Closed]	Window Position [Closed] or [Down]	Cycle Distance [mi]	Cycle Fuel economy [mpg] (Fuel scale)	Cycle HV battery Integrated net current [DC Ah]	Cycle HV battery Average Zero crossing Voltage [V]	Cycle HV battery Net Energy [DC Wh]	Cycle HV battery Net Energy Consumption [DC Wh/mi]
Test information				**Test cell information**			**Test Cell setup**		**Vehicle setup**					**Electric energy consumption**			
Test sequence purpose: Standard testing																	
61203025	UDDS CS	CSt	03/07/12,	20	9.67	29.26	SM	Off	72 °F	Closed	Closed	7.44	-	8.332	379.191	3109	418
61203026	Highway	HSt	03/07/12,	20	11.91	29.24	SM	Off	72 °F	Closed	Closed	10.25	-	9.275	374.008	3368	329
61203027	UDDS HS	HSt	03/07/12,	20	12.73	29.23	SM	Off	72 °F	Closed	Closed	7.44	-	7.602	367.981	2756	371
61203028	US06	HSt	03/07/12,	20	13.24	29.23	SM	Off	72 °F	Closed	Closed	7.99	-	9.921	359.985	3366	421
61203029	US06	HSt	03/07/12,	20	13.64	29.22	SM	Off	72 °F	Closed	Closed	7.99	-	10.114	345.800	3344	419
61203030	*Partial UDDS HS	HSt	03/07/12,	20	14.61	29.22	SM	Off	72 °F	Closed	Closed	4.63	-	5.439	305.200	1659	358
Full charge test summary											**Totals**	**45.74**		**50.683**		**17603**	
*Following Test **61203030** vehicle charge was fully depleted																	
61203031	UDDS CS	CSt	03/08/12,	72	41.32	29.28	SM	Off	Off	Closed	Open	7.43	-	4.068	385.991	1554	209
61203032	HIghway	HSt	03/08/12,	72	42.57	29.28	SM	Off	Off	Closed	Open	10.25	-	6.277	382.789	2368	231
61203033	UDDS HS	HSt	03/08/12,	72	47.66	29.31	SM	Off	Off	Closed	Open	7.44	-	3.867	379.018	1446	194
61203034	US06	HSt	03/08/12,	72	42.81	29.32	SM	Off	Off	Closed	Open	7.99	-	7.455	374.858	2680	336
61203035	US06	HSt	03/08/12,	72	44.98	29.34	SM	Off	Off	Closed	Open	8.00	-	7.546	367.832	2678	335
61203036	UDDS HS	HSt	03/08/12,	72	42.77	29.34	SM	Off	Off	Closed	Open	7.44	-	4.012	365.389	1449	195
61203037	Highway	HSt	03/08/12,	72	41.87	29.35	SM	Off	Off	Closed	Open	10.25	-	6.580	360.812	2339	228
61203038	UDDS HS	HSt	03/08/12,	72	45.16	29.36	SM	Off	Off	Closed	Open	7.45	-	4.107	353.452	1435	193
61203040	*Steady State Speed 55mph	HSt	03/08/12,	72	40.62	29.37	SM	Off	Off	Closed	Open	7.86	-	6.393	305.287	2022	257
Full charge test summary											**Totals**	**74.10**		**50.305**		**17972**	
*Following Test **61203040** vehicle charge was fully depleted																	
Re-charging information. Charge followed above 72F testing											HV battery integrated current [DC Ah]	**49.67**					
Level: Full											Charger integrated current [AC Ah]	**108.36**					
											HV battery integrated power [DC Wh]					**18876**	
											Charger integrated power [AC Wh]					**21679**	
61203052	UDDS CS	CSt	03/12/12,	95	39.88	29.15	SM	850	72 °F	Closed	Closed	7.44	-	5.154	381.759	1967	265
61203053	Highway	HSt	03/12/12,	95	36.20	29.13	SM	850	72 °F	Closed	Closed	10.24	-	6.563	381.573	2477	242
61203054	UDDS	HSt	03/12/12,	95	31.04	29.13	SM	850	72 °F	Closed	Closed	7.44	-	4.627	376.006	1741	234
61203055	US06	HSt	03/12/12,	95	32.30	29.12	SM	850	72 °F	Closed	Closed	7.99	-	7.621	365.301	2736	343
Partial charge test summary											**Totals**	**33.11**		**23.965**		**8921**	

Summary notes

For the highway and US06 cycles only the second (hot) test results are presented in this summary.
Electric energy consumption:
HV battery Integrated net current --> Integrated current as reported by power analyzer
HV battery Average Zero crossing Voltage --> Calculated average zero crossing voltage over the phase or cycle
HV Net Energy --> Integrated power as reported by power analyzer
Note that HV Net Energy is not equal to the product of HV battery Integrated net current times Average Zero crossing Voltage.
* The vehicle coast down information for EPA

Advanced Powertrain Research Facility Data referencing:

- This data has originated from the Argonne National Laboratory D[3] website. http://webapps.anl.gov/vehicle_data/
- The purpose of this information is to provide advanced technology vehicle chassis dynamometer test data for the engineering community. Mostly comprised of vehicle benchmarking test results, it is intended for the better understanding of the technology and for education. Data from this website may not used as a source for publication or profit without consent of Argonne National Laboratory.
- Please contact d3info@anl.gov for questions, comments or inquiries.